DOCUMENT RESUME

ED 275 635 SP 028 170

AUTHOR Ayers, Jerry B.
TITLE Study of the Teacher Preparation Programs of Tennessee Technological University. Report 86-2. Tennessee Technological University Teacher Evaluation Model--Year XIII.
INSTITUTION Tennessee Technological Univ., Cookeville. Coll. of Education.
PUB DATE Jul 86
NOTE 67p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Comparative Analysis; *Graduate Surveys; Higher Education; *Longitudinal Studies; *Program Evaluation; *Teacher Education Programs; Teacher Evaluation
IDENTIFIERS Tennessee Technological University

ABSTRACT

A report is given of the results of the 13th evaluation study of graduates from Tennessee Technological University College of Education. The specific objective for the use of this longitudinal model was the evaluation and subsequent modification and improvement of the teacher education programs. The sample size by year of graduation was: 1983--16, 1984--19, and 1985--44. Detailed information was collected on each subject by use of standardized and locally developed instruments. The major findings of the study for the first year subjects were similar to those reported in the past 12 years. Comparisons between the B.S. and M.A. graduates indicated few significant differences; first year B.S. graduates appeared to be functioning at a level comparable to the M.A. graduates. Graduates in their second and third year of participation in the project appeared to be functioning at a higher level than first year graduates. Conclusions and recommendations were advanced from the results of the study that are being used to modify and improve the teacher education programs at the university. An 83-item list of reports and studies related to the teacher preparation programs of Tennessee Technological University is appended. (Author/JD)

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STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY
REPORT 86-2

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL - YEAR XIII JULY, 1986

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STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 86-2

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL--YEAR XIII

Report Prepared by:

Jerry B. Ayers
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July 1986

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Abstract

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL--YEAR XIII

In 1973 Tennessee Technological University developed and implemented a model for systematic data gathering and for making evaluations of the programs in teacher education. The specific objective for the use of the longitudinal model was the evaluation and subsequent modification and improvement of the programs for the preparation of teachers. During the 13th year (1985-86) of the operation of the project, three distinct groups of graduates who had completed either the B.S. or M.A., with major emphasis in a teaching field participated in the study. The sample size by year of graduation was as follows: 1983--16, 1984--19, and 1985--44. Detailed information was collected on each subject by use of standardized and locally developed instruments. The basic instruments have remained the same during the 13 years of the study and included: (1) University records, (2) principals evaluations, (3) the California F-Scale, (4) a measure of the satisfaction of the students of the graduates, and (5) observation in the classrooms of the subjects by trained observers using such measures as Flanders Interaction Analysis, the Classroom Observation Record, and the Tuckman Teacher Feedback Form. Descriptive and comparative statistics were computed.

The major findings of the study for the first year subjects were similar to those reported in the past 12 years of the study. Comparisons between the B.S. and M.A. graduates indicated few significant differences. In general the first year B.S. graduates appeared to be functioning at a level comparable to the M.A. graduates. This was in general agreement with the findings of the past several years. Comparisons of 1985 graduates with those first year participants in 1983 and 1984 indicated few differences. Graduates in their second and third year of participation in the project appeared to be functioning at a higher level than first year graduates. Conclusions and recommendations were advanced from the results of the study that are being used to modify and improve the teacher education programs of Tennessee Technological University.

Based on the results of the study and the applications that have been made, the model has become a permanent operational feature of the teacher education programs of the University. A Center on Teacher Education Evaluation became operational at the University on July 1, 1986. This five year project will be charged with the development and testing of models and systems for the evaluation of teacher education programs for not only Tennessee Technological University but for institutions throughout the United States. It is anticipated the project can have a significant impact on teacher education programs at the University.

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PREFACE

Followup evaluation has been an integral part of the teacher education programs of Tennessee Technological University for the past 16 years. Followup studies of all graduates have been conducted on a regular basis and special studies have been carried out to provide input for the overall operation of the programs of the University. In 1973, a longitudinal model was developed and implemented for conducting followup evaluations. During 1985-86 this model was used for the 13th year to gather data. The application of the model is believed to be one of the longest ongoing teacher evaluation projects in the nation. The project has received national recognition as an exemplary program for teacher evaluation. In July, 1985, the University was honored by the American Association of State Colleges and Universities. The project received a Showcase of Excellence Award in the category of Creating New Strategies for Ensuring the Quality of Education Graduates.

The purpose of this report was to present the findings of the 13th year of the application of the model. The report is by no means complete, however, it serves to inform the reader of the basic procedures used and the preliminary findings of the 13th year of the study. In order to conserve resources, only essential information was presented. Readers of the report are invited to pose additional research questions and to request additional data from the files of the project. Reports of the results of the application of the Tennessee Technological University Teacher Evaluation Model for the period 1973-74 through 1984-85 are available through the ERIC system or from the Office of the Associate Dean of the College of Education at Tennessee Technological University.

The author of this report is indebted to the efforts of several individuals that have been extensively involved in working with the project during the past year. These individuals include: Annetta K. Gilliam and Margie A. Garrett, graduate assistants; Patricia A. Eaves, secretary; and Sharon A. Heard, analyst. In addition thanks are extended to all principals, teachers, superintendents, and other school personnel that provided technical assistance, data, and allowed the project staff to work with them in various ways.

The project has been a success and much useful information has been gathered for the development and refinement of the teacher education programs of the University. Because of the success of the program, the State of Tennessee has provided funds for the establishment of a Center of Excellence in Teacher Education Evaluation at the University. During the next five years a major research and development effort will be mounted to improve education through more effective means for the evaluation of the programs for the preparation of teachers. The reader is invited to request additional information about the Center of Excellence.

Jerry B. Ayers
Associate Dean
College of Education
July, 1986

CHAPTER I

INTRODUCTION AND PROCEDURES

Beginning in 1970, a series of separate studies was begun related to the evaluation of students enrolled in and graduates of the teacher education programs of Tennessee Technological University. The research was systematic and designed to meet standards established by the National Council for the Accreditation of Teacher Education as well as to answer such questions as course effectiveness, the proper sequencing of courses, factors related to achievement, success of the graduates after entering the teaching profession, better methods of instruction, and the degree of achievement of the stated objectives of the teacher education program. It should be noted that there are companion studies designed to evaluate the programs for the preparation of school service personnel at the M.A. and Ed.S. levels.

The works of Sandefur and Adams (1, 2, 3) led to the development of the Tennessee Technological University Teacher Evaluation Model. This model was employed to evaluate the graduates of the programs of the University designed to prepare teachers at the bachelor's and master's levels. During 1973-74 the Evaluation Model was implemented and operated through 1984-85 with funds available from the budget of the College of Education of the University. The results of the application of the model were summarized in a series of yearly reports (see Appendix A, items 20, 27, 34, 37, 39, 45, 54, 59, 63, 69, 75, 81). These reports and others are available through the Office of the Associate Dean of the College of Education of Tennessee Technological University or through the ERIC System.

The 13th year of the application of the Evaluation Model was initiated in the fall of 1985. The remainder of this chapter describes the purpose of the twelfth year of the operation of the model and limitations of and the procedures used in conducting the major parts of the study (see Appendix A, item 62). Chapter II contains a summary of the analyses of selected data accumulated on graduates who were participants in the project for the second and third year. Chapter III includes presentations and interpretations of the data collected as a result of a study of the 1984 graduates of the teacher education programs. Chapter IV contains a summary, conclusions, and recommendations. Appendix A includes a list of all evaluative studies related to teacher education that have been conducted as a part of the efforts of the Office of the Associate Dean of the College of Education and through other units of the University.

Purposes

The purposes of the study reported in this document included the following:

1. To provide information for faculty and administrators concerned with teacher education programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development.

2. To aid in the process of making long-range plans for improving the total program of the University with particular emphasis on the teacher education program.

3. To continue the development and refinement of the Tennessee Technological University Teacher Evaluation Model.

Specific objectives to be accomplished as a part of this study were as follows:

1. To continue studying in a longitudinal manner those subjects who had previously participated in the application of the Model (1983-84 through 1984-85).

2. To provide a descriptive profile of a sample of 1985 B.S. and M.A. graduates of the teacher education programs of Tennessee Technological University.

3. To determine relationships among selected variables that were measured as a part of the total study.

4. To provide comparisons between the graduates of the teacher education programs of Tennessee Technological University with those who might be considered as effective teachers as defined in the literature of teacher education.

5. To disseminate relevant research data to the faculty and administration of the University.

6. To provide information for curriculum evaluation and development based on empirical research data.

7. To continue to evaluate the procedures employed in the study and to make long-range plans for modifications and refinement of the basic Evaluation Model.

Limitations

The general limitations for this study were primarily concerned with sampling techniques:

1. Subjects for the study were individuals who were 1985 graduates of a bachelor's or master's program at Tennessee Technological University designed to prepare themselves as teachers, or they were individuals who participated in the study during the period 1983-1984 through 1984-1985.

2. Subjects were teaching in the State of Tennessee within approximately a 75-mile radius of Cookeville, Tennessee. (Approximately 65 percent of all graduates of the teacher education programs of the University that were teaching resided within the specified geographical limits of the study.)

3. The subjects volunteered to participate in the study.

4. The subjects who participated in the study received the permission of their principals and superintendents.

5. The sample sizes of the 1983 and 1984 graduates were reduced each year by about 50 percent due to attrition from the teaching profession or moving out of the geographical limits of the study. The number of individuals who have only the bachelor's degree is disproportionate in the total sample. Therefore, the findings of the study may be limited in their applicability to the population of graduates from the University and also other institutions.

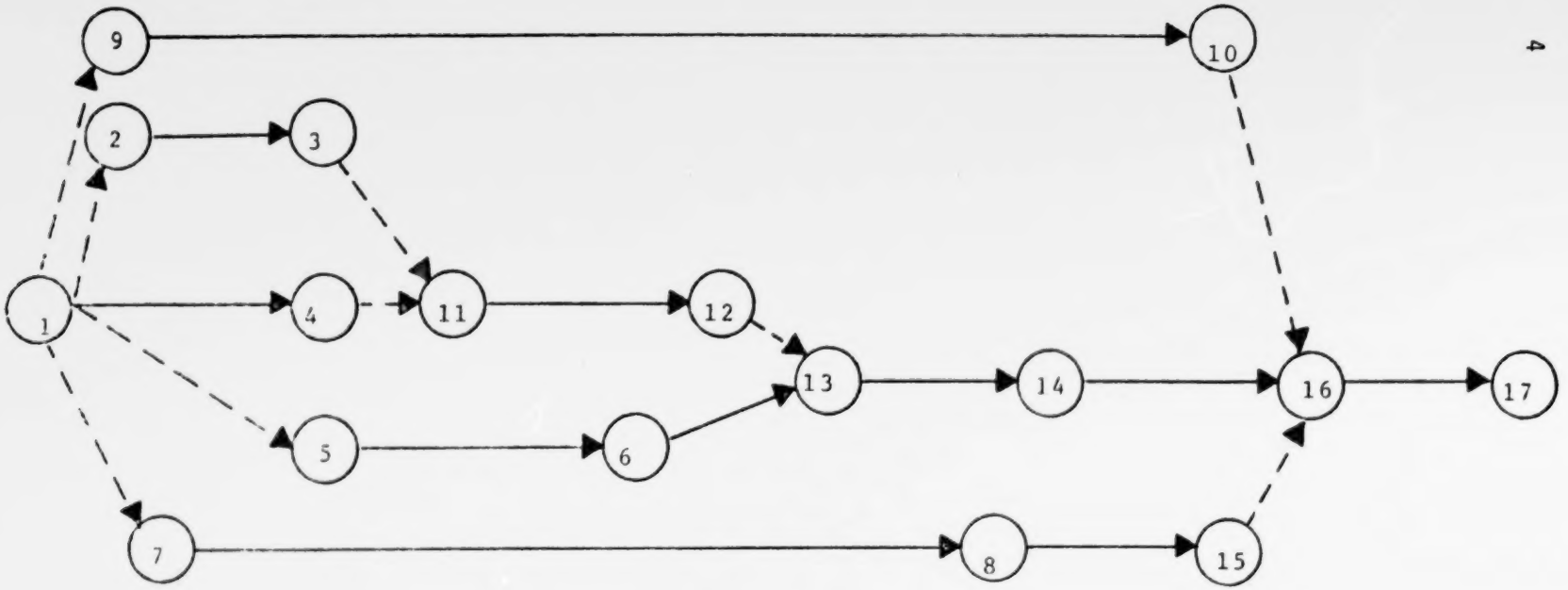
Limitations 1 through 4 above were imposed in order to make the study more feasible regarding the followup of the graduates. Voluntary participation was deemed necessary due to the extensive collection of data and completion of forms. The limitation of a 75-mile radius of Cookeville, Tennessee, was necessary because of the limited travel funds available and the time available for the research assistants to visit in the classrooms of the participating subjects.

Procedures

The purposes of this section was to provide the reader with a brief description of the procedures employed in collecting data utilized in this study. This section was concerned specifically with selection of subjects, implementation of the study, training of staff, and methods of data collection and analysis. Figure 1 shows a PERT chart of the major activities of the project from September 1985 through July 1986. Appendix B contains copies of the instrumentation used in the study.

Selection of Subjects

Three groups of subjects participated in the 1985-86 phase of the project. The first group of individuals (1983 graduates) was participating in the project for the third year, while the second group (1984 graduates) was participating for the second year. The third group consisted of those individuals that received either the B.S. or M.A. in 1985. Table 1 shows a summary of the number of individuals (by year of graduation) participating in each phase of the study, and Table 2 shows a summary of the grade level in which the subjects were teaching during 1985-86. Table 3 shows a comparison of sample size across all years from which actual usable data were collected.



Summary of Activities

1-4 Finalize Plans for Visiting Subjects in 1983 and 1984 Phases of Study
2-3 Training of Observers

5-6 Survey all 1985 Graduates
7-8 Conduct Related Studies
9-10 Maintain Contact With Other Projects and Survey New Literature

11-12 Make School Visits on 1983 and 1984 Graudates
6-13 Select Sample of 1985 Graduates for Study as Part of Followup
13-14 Make School Visits on 1985 Graduates
8-15 Prepare Reports of Related Studies
16-17 Make Plans for Revision of the Followup Studies

Figure 1. PERT Chart on Major Activities for 1985-86.

Table 1

NUMBER OF SUBJECTS BY YEAR OF GRADUATION PARTICIPATING IN EACH PHASE OF STUDY

Phase of Study	1983	1984	1985	Total*
1983-1984	26/16	--	--	56/28
1984-1985	13/8	25/15	--	49/27
1985-1986	11/5	12/7	22/22	45/34

*No. M.A./No. B.S.

Table 2

SAMPLE FOR INTENSIVE FOLLOWUP 1985-86

Year	K	1-3	4-7	8-12**	Total*
1983	2/0	1/2	4/1	4/2	11/5
1984	2/0	6/2	2/1	2/4	12/7
1985	4/2	6/7	11/7	1/6	22/22
Total	8/2	13/11	17/9	7/12	45/34

*No. M.A./No. B.S.
**Teaching Areas: 4-Special Education, 3-Mathematics, 3-Science, 2-English, 2-Health, 2-Music, 1-Reading, 1-Physical Education, 1-History.

Table 3

COMPARISON OF SAMPLE SIZES ACROSS ALL YEARS OF STUDY

Year of Graduation	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
1973	57	35	27	21	15	--	--	--	--	--	--	--	--
1974	--	48	26	22	14	9	--	--	--	--	--	--	--
1975	--	--	44	23	17	11	5	--	--	--	--	--	--
1976	--	--	--	26	16	11	6	--	--	--	--	--	--
1977	--	--	--	--	50	26	19	10	--	--	--	--	--
1978	--	--	--	--	--	45	22	12	--	--	--	--	--
1979	--	--	--	--	--	--	61	33	13	--	--	--	--
1980	--	--	--	--	--	--	--	57	27	19	--	--	--
1981	--	--	--	--	--	--	--	--	47	25	14	--	--
1982	--	--	--	--	--	--	--	--	--	47	24	15	--
1983	--	--	--	--	--	--	--	--	--	--	42	21	16
1984	--	--	--	--	--	--	--	--	--	--	--	40	19
1985	--	--	--	--	--	--	--	--	--	--	--	--	44
Total	57	83	97	92	112	102	113	112	87	91	80	76	79

As a part of the routine followup activities of the Office of the Associate Dean, all 1985 graduates of the teacher education programs were contacted in the late fall of 1985 (144 B.S. graduates who were eligible for a teaching certificate and 97 M.A. graduates). As a result of this initial survey (Appendix, no. 82), all graduates who were teaching within the defined geographical limits of the project were contacted by telephone and asked to participate in the study. A total of 22 B.S. and 22 M.A. graduates volunteered to participate (see Tables 1 and 2).

Figure 2 shows a map of selected portions of Tennessee. The numerals within each county indicate the number of individuals who participated in the study during the 1985-86 phase of the study. Table 4 shows a summary of the number of individuals by year of graduation participating from each county.

Instrumentation

Instrumentation for the 1984-85 phase of the study was identical to that used during the past several years of the project. The reader is referred to the Appendix of Report 86-2 for more information with regard to instrumentation.

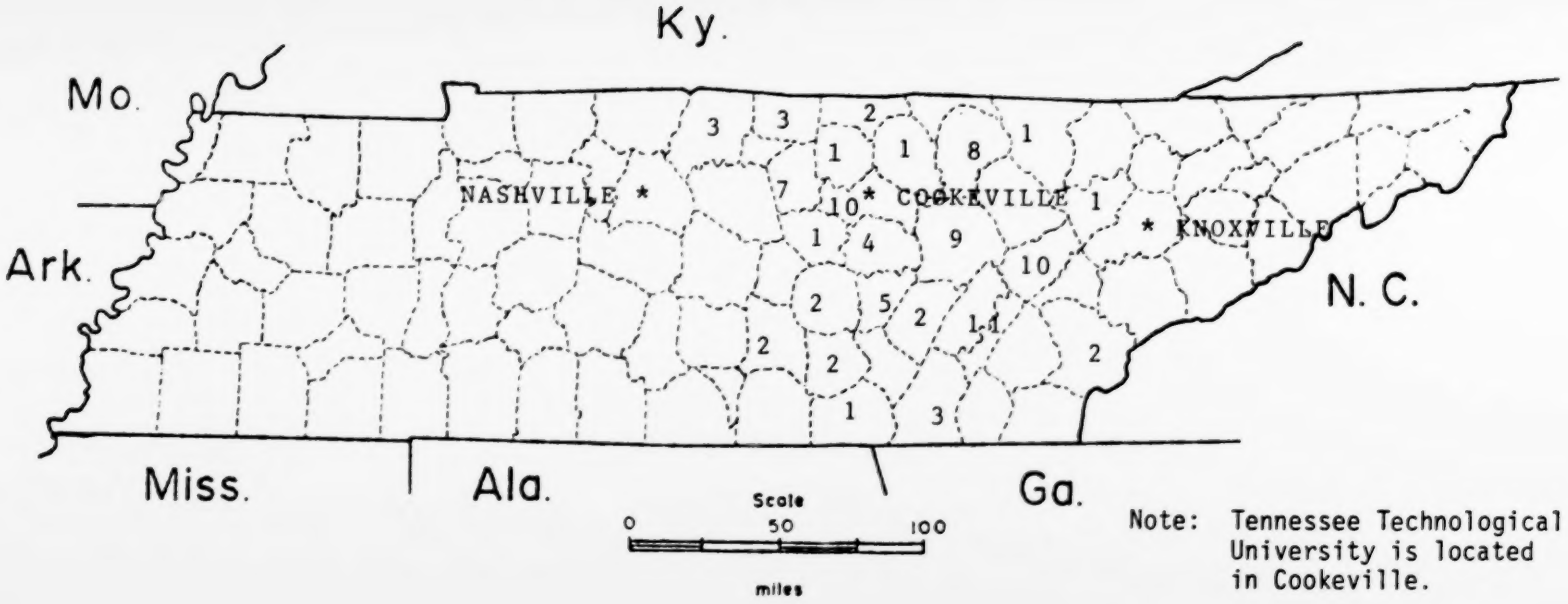


Figure 2. Number of Participants by County in 1985-86 Phase of the Study.

Table 4

NUMBER OF SUBJECTS BY DATE OF GRADUATION AND COUNTY IN WHICH TEACHING 1985-1986

County	1983	1984	1985	Number
Anderson			1	1
Bledsoe			2	2
Clay	2			2
Coffee	1	1		2
Cumberland		1	8	9
DeKalb		1		1
Fentress	1	3	4	8
Grundy		1	1	2
Hamilton			3	3
Jackson			1	1
Macon	1		2	3
Marion	1			1
Meigs			1	1
Monroe		1	1	2
Overton			1	1
Putnam	1	2	7	10
Rhea		1		1
Roane	1	6	3	10
Scott	1			1
Smith	3		4	7
Sumner			3	3
Van Buren	3		2	5
Warren		1	1	2
White	1	1	2	4
Total	16	19	44	79

Training of Observers

The procedures for the training of observers were outlined in detail in Report 86-2 (Appendix, no. 62).

Collection of Data

Data for this study were collected by mail surveys, interviews, and observations in the classrooms of graduates. Initially, all subjects were contacted by mail and dates were set for observational visits by the graduate research assistants (both previous subjects and new subjects in

the study). These dates were verified with the appropriate administrative authorities in each school and school system. A letter explaining the project in detail was sent to all subjects, principals, and superintendents. The subjects, their principals, and superintendents were invited to make comments and suggestions for conducting the study.

Each subject was visited on at least one occasion by a trained (observer) graduate assistant. The observer spent approximately a half day in each subject's classroom and completed from two to six 20-minute periods of observation using a ten category system of interaction analysis. At the completion of all observations, the Classroom Observation Record and the Tuckman Teacher Feedback Form were completed.

The Student Evaluation of Teaching (SET-I) was administered to the students of teachers in grades 4 through 12. The Student Evaluation of Teacher (SET-II) was administered to students of subject's in grades K-3. While the students were completing the appropriate version of the SET, subjects who were participating in the project for the first year completed the California F-Scale.

The observer interviewed each graduate with regard to his/her opinions and ideas about the teacher preparation program of the University. Also, the observer asked each principal to complete the Teacher Evaluation by Supervisor form.

Pertinent data such as quality point average, National Teacher Examination scores, etc. were collected from the permanent records of all 1985 graduates (see Report 86-2 for more details relative to the collection of data).

Analyses of Data

Basic descriptive and inferential statistical methods were used to analyze the data. The statistical techniques were described in more detail at the appropriate points in this report.

Summary

In summary, this chapter contains a brief overview of the total operation of the 1985-86 phase of the longitudinal study of the graduates of the teacher education programs of Tennessee Technological University. Included in this chapter was a summary statement of the major purposes of the project, limitations of the study, and major procedures employed in conducting the project. Data from the graduates were gathered from four major sources including self or personal, from supervisors and principals, students of the graduates, and by independent observers. Included in the chapter was a listing of the major instruments used in gathering data from the four primary sources. The major purposes and procedures of the project have remained virtually unchanged over the eleven years of study. It was felt the information available from this report, the companion reports completed during the period 1974 through 1985, and in particular Report 86-2 would be useful to those individuals attempting to replicate this

study. It should be noted that additional information and specifics related to methodology employed in this study were available from the Office of the Associate Dean of the College of Education.

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1. Sandefur, J.T. An Illustrated Model for the Evaluation of Teacher Education Graduates, Washington: American Association of Colleges for Teacher Education, 1970.

2. Adams, Ronald D. Western Kentucky University's Teacher Preparation Evaluation Model, Phase I, Cycle I. Annual Report. Bowling Green, KY: Office of Educational Research, Western Kentucky University, 1972.

3. Sandefur, J.T. and Ronald D. Adams. "An Evaluation of Teaching: An Interim Research Report," Journal of Teacher Education, 27 (1): 71-6, Spring 1976.

CHAPTER II

COMPARISONS OF SECOND AND THIRD YEAR FOLLOWUP PARTICIPANTS

The Tennessee Technological University Teacher Evaluation Model, was designed to be used to gather data about graduates for up to five years. From 1973 through 1978 this pattern was followed. However, beginning in 1979, data were collected for only three years because of financial limitations on the project and the lack of ability to interpret and use the data fully. The purpose of this chapter was to show some qualitative comparisons of data for second and third participants in the project. It will be noted that the sample sizes in some cases were small. However, it is felt that the reader can gain some general ideas about the graduates of the University after they have been teaching for two or three years after receiving their last degree.

In order to simplify the tables the reader should keep in mind the following:

1. 2nd year refers to those 1984 graduates who were participating in the project for the second year.

2. 3rd year refers to those 1983 graduates who were participating in the project for the third year.

Personal Variables

Comparisons of personal variables were limited due to attrition from the followup study. Also, at the beginning of this cycle the National Teacher Examinations changed format, making it impossible to equate across the new and older versions of the tests. Table 5 shows the mean F-Scale scores for the various groups. Previous research indicated that there were few significant differences between those individuals with the bachelor's and master's degrees. Therefore, for purposes of this study, the groups were collapsed. Table 5 shows the mean F-Scale scores for second and third year participants in the study by teaching level (i.e., elementary and secondary). In the past the mean F-Scale score for participants in the study has been approximately 101, with elementary teachers being somewhat lower and secondary teachers somewhat higher. The mean score for the 32 second and third year participants was 104.5. Secondary teachers appeared to be more authoritarian in their beliefs than did elementary teachers.

Table 5

COMPARISON F-SCALE SCORES FOR SECOND YEAR (1984) AND THIRD YEAR (1983) GRADUATES BY TEACHING LEVEL[1]

Year and Teaching Level	N	$\bar{X}$	SD
Second Year			
Elementary	10	100.7	21.9
Secondary	6	107.9	17.5
Third Year (1983 Graduates)			
Elementary	10	101.2	5.1
Secondary	6	113.3	16.6

[1] B.S. and M.A. subjects collapsed by teaching level.

Principal's Ratings

Principal's ratings of the graduates were high. Table 6 shows a summary (by teaching level) of the mean principal's ratings for the third year participants of the study. Mean ratings on all items were 4.7 and higher. There were no differences between the two teaching levels. Table 7 shows a comparison between elementary and secondary teachers who were in their second year in the study. In general, elementary teachers were rated about 0.5 points higher on each item than the secondary teachers. No explanation can be offered for these results. As a whole second year participants were rated higher than third year participants. These findings are somewhat reversed from those of previous years. It should be noted again, however, that the sample sizes are small and the groups are composed of individuals at both the master's and bachelor's levels.

Table 6

COMPARISON OF PRINCIPAL'S RATINGS OF THIRD YEAR (1983)
BY TEACHING LEVEL (ELEMENTARY OR SECONDARY)

Factor	Elementary (N=10) $\bar{X}$	SD	Secondary (N=6) $\bar{X}$	SD
I Subject Matter Competence	4.7	0.5	4.7	0.5
II Relations with Students	4.8	0.4	4.7	0.5
III Appropriateness of Assignments	4.7	0.5	4.7	0.5
IV Overall Effectiveness	4.8	0.4	4.8	0.4

Table 7

COMPARISON OF PRINCIPAL'S RATINGS FOR SECOND YEAR 1984 PARTICIPANTS
BY TEACHING LEVEL (ELEMENTARY OR SECONDARY)

Factor	Elementary (N=10) $\bar{X}$	SD	Secondary (N=7) $\bar{X}$	SD
I Subject Matter Competence	4.8	0.4	4.3	0.5
II Relations with Students	5.0	0.0	4.2	0.8
III Appropriateness of Assignments	4.7	0.5	4.3	0.5
IV Overall Effectiveness	4.8	0.4	4.3	0.5

Student Evaluations

The Student Evaluation of Teacher (SET-I) was administered in the classrooms of those graduates who were teaching above the third grade. The Student Evaluation of Teaching (SET-II) was administered in the classrooms of those graduates who were teaching in grades K through 3. The remainder of this section was divided based on the two instruments.

SET-I

Results of the administration of the SET-I in the classrooms of second and third year graduates were shown in, respectively, Tables 8 and 9. There were no second year graduates teaching in grades 4 though 7. Therefore, the data shown in Table 8 were restricted to these graduates who were teaching in grades 7-12. The results were typical of those reported in earlier years of the study. Also, the results were similar to those obtained with second year graduates (see Table 9).

Table 8

SET-I SCORES FOR SECOND YEAR SECONDARY GRADUATES (N=6)

Factor		$\bar{X}$	SD
I	Friendly and Cheerful	338.8	31.2
II	Knowledgeable and Poised	335.5	42.7
III	Lively and Interesting	289.3	39.9
IV	Firm Control (Discipline)	305.5	31.2
V	Non-Directive (Dem. Process)	236.0	33.9
	Composite Score	300.8	19.8

Table 9 shows the results of the administration of the instrument in the classrooms of third year participants. The sample sizes were small and the data does not lend itself to the use of inferential statistics. However, it appears that there were few differences between the elementary and secondary graduates.

Table 9

SET-I SCORES FOR THIRD YEAR PARTICIPANTS BY TEACHING LEVEL

	Factor	Elementary (N=6) $\bar{X}$	Elementary (N=6) SD	Secondary (N=6) $\bar{X}$	Secondary (N=6) SD
I	Friendly and Cheerful	326.7	13.1	329.2	44.8
II	Knowledgeable and Poised	352.8	18.3	368.5	54.6
III	Lively and Interesting	284.2	23.5	283.3	38.1
IV	Firm Control (Discipline)	306.3	29.6	321.0	33.2
V	Non-Directive (Dem. Process)	236.5	28.4	245.3	37.7
	Composite Score	301.2	11.1	309.3	34.2

SET-II

The SET-II was used in the classrooms of those graduates teaching in grades K-3. Table 10 shows a comparison between second and third year participants in the study. There were no differences. The results were similar to those reported in earlier years of the study.

Table 10

COMPARISON OF SET-II SCORES FOR SECOND AND THIRD YEAR GRADUATES

Factor	Second Year (N=7) $\bar{X}$	Second Year (N=7) SD	Third Year (N=6) $\bar{X}$	Third Year (N=6) SD
Rapport	9.47	0.53	9.86	0.34
Stimulating Interactive Style	9.65	3.13	10.67	3.13
Fosterance of Self Esteem	6.31	0.60	6.00	0.38

Independent Observers

Data were collected by independent observers using three instruments including Flanders Interaction Analysis, the Classroom Observation Record, and the Tuckman Teacher Feedback Form. The remainder of this section was subdivided based on the three instruments.

Flanders Interaction Analysis

The mean values of five ratios derived from the use of Flanders Interaction Analysis in the classrooms of the graduates were shown in Table 11. This table includes the mean values for both second and third year elementary and secondary graduates. As would be expected, elementary graduates were using more indirect teaching techniques than the secondary groups. In all four groups the ratio of student talk to toal teaching was less than what has been reported in the past. No explanation for this phenomena can be advanced at this time. Also, it was noted that the mean lecture to total teaching ratios in all four groups were higher than reported in the past.

Table 11

COMPARISON OF FLANDERS RATIOS FOR SECOND AND THIRD YEAR ELEMENTARY AND SECONDARY GRADUATES

Ratio	2nd Yr. Elem. (N=10)		3rd Yr. Elem. (N=10)		2nd Yr. Sec. (N=6)		3rd Yr. Sec. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.32	0.97	1.98	2.62	1.34	1.20	1.14	1.87
i/d	0.53	0.25	0.54	0.21	0.21	0.10	0.15	0.14
ST/TT	0.36	0.18	0.61	0.35	0.40	0.24	0.18	0.26
Sil/Tot	0.56	0.55	0.47	0.36	0.19	0.13	0.48	0.44
Lec/Tot	0.55	0.09	0.53	0.12	0.73	0.14	0.80	0.09

Classroom Observation Record

Mean scores derived from the use of the Classroom Observation Record (COR) in the classrooms of the second and third year teachers were shown in Table 12. In general second year subjects were rated slightly higher than third year subjects. There were no significant differences between the four groups. The secondary graduates appeared to receive slightly lower scores than the elementary graduates. This trend has been in evidence in earlier years of the study.

Table 12

COMPARISON OF COR FACTOR SCORES FOR SECOND AND THIRD YEAR ELEMENTARY AND SECONDARY GRADUATES

	2nd Yr. Elem. (N=10)		3rd Yr. Elem. (N=10)		2nd Yr. Sec. (N=6)		3rd Yr. Sec. (N=6)	
Factor	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	46.9	2.3	46.9	2.4	48.6	0.5	45.8	2.5
II	71.2	4.8	71.5	6.4	72.8	3.5	70.7	6.4
III	21.5	4.5	24.1	3.6	26.3	1.8	23.8	3.0

Tuckman Teacher Feedback Form

Table 13 shows the results of the use of the Tuckman Teacher Feedback Form (TTFF) in the classrooms of those graduates who were participating in the second and third year of the study. Second year secondary graduates received the highest overall mean ratings. In general the other three groups received ratings slightly below the means achieved by other groups in past years of the study. Third year elementary graduates received higher ratings than second year graduates; however, the reverse was in evidence for the secondary teachers. Overall, the results were similar to those that have been obtained in earlier years of the study.

Table 13

COMPARISON OF TUCKMAN RATINGS FOR SECOND AND THIRD YEAR ELEMENTARY AND SECONDARY GRADUATES

Factor	2nd Yr.Elem. (N=10)		3rd Yr.Elem. (N=10)		2nd Yr.Sec. (N=6)		3rd Yr.Sec. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Creativity	26.7	6.6	26.5	7.9	28.6	8.9	26.3	5.0
II Dynamism (Dominance of Energy)	27.9	3.0	27.0	7.4	27.7	3.9	25.0	3.3
III Organized Demeanor (Organization and Control)	33.8	7.0	36.4	3.3	40.2	3.2	34.8	3.5
IV Warmth and Acceptance	34.6	5.8	35.8	5.0	38.8	4.1	34.3	4.2

Discussion

This phase of the study was hampered because of the small sample sizes by degree level and in the respective teaching areas (i.e., elementary and secondary). Previous research indicated there were few differences between those individuals with the bachelor's and master's degrees. Therefore, the purposes of data analyses, in the 1985-86 study, these two groups were combined. Comparisons were made between those teaching at the elementary level and at the secondary level.

An examination of mean scores achieved on the California F-Scale indicated a pattern present in earlier phases of the longitudinal application of the Tennessee Technological University Teacher Evaluation Model. Secondary teachers appeared to be more authoritartian in their beliefs than elementary teachers. Also, third year teachers appeared to be more authoritartian than second year teachers. As a whole the 32 individuals had achieved higher mean scores than comparable groups over the years.

Principal ratings of the teachers were similar to those reported in earlier phases of the study. Subject matter competency and appropriateness of assignments seemed to be areas in which principals felt that there might be some weaknesses. In general the ratings were favorable and exceeded past expectations.

Ratings given by students of the graduates indicated they felt the teachers might be too directive in the classroom and are failing to use democratic processes. This is somewhat reversed from the findings of earlier years of the study. It was also interesting to note that for the ratings given to the question of discipline in the classroom have increased. It appears that the graduates may be in better control of the classrooms and that the issues of discipline that have surfaced in the past may be resolved, at least in part. This issue will be studied further in future years of the project.

Ratings given by independent observers were mixed. An examination of the ratios derived from Flanders Interaction Analysis indicated second and third year teachers were performing at about the same level as first year teachers. However, an examination of the results of the administration of the Classroom Observation Record and the Tuckman Teacher Feedback Form indicated second and third year teachers received lower ratings than first year teachers.

In general, it was found that second and third year teachers were functioning at a level comparable to or greater than for first year teachers. Attrition from the followup study, however, leads one to question the results of this aspect of the study. There are too many variables that cannot be controlled in a study of this nature.

The results of the study indicated that the teachers were well organized in the classroom, competent in the subject(s) taught, had good rapport in the classroom, were perceived as being friendly and cheerful, and were confident and poised in the classroom. On the negative side, the second and third year graduates need to be more stimulating in the classroom, and use more praise and other indirect teaching methods. Elementary teachers need to encourage more independence in their children and encourage self-esteem.

What are the implications of this part of the study for improving the programs in teacher education at Tennessee Technological University? It is difficult to say at this point. There is a definite need to continue the inservice aspects of the programs for the programs of the College of Education. In the early years in the classroom, there is an apparent need for additional help for teachers in developing teaching strategies, classroom management, and the like.

Summary

This chapter contained the results of the followup of graduates who had received the B.S. or M.A. and had participated in the application of the Tennessee Technological University Teacher Evaluation Model for the second and third year. The results of the study were presented in a qualitative manner and indicated that second and third year teachers were performing similar or at a slightly higher level than first year teachers. The results of the study were inclusive and provided only limited information that may be of use in improving the teacher education programs of the University.

CHAPTER III

PRESENTATION AND ANALYSES OF DATA FOR 1985 GRADUATES AND COMPARISONS WITH 1982, 1983 AND 1984 GRADUATES

Chapter III contains a presentation and analyses of data for those individuals who received the B.S. or M.A. in 1985 and were participating in the study for the first time. Also shown were comparisons of the data with other first year participants, i.e., those who completed their last degrees in 1982, 1983 or 1984 and participated in the study during the following years. Initially 44 individuals (22 at the B.S. and 22 at the M.A. levels) agreed to serve as subjects for the study. Since previous studies had indicated there were few differences in those individuals teaching in the elementary grades and those teaching at the secondary level, the data were combined for some comparisons. Data for bachelor's and master's graduates were combined for certain analyses. Also, comparisons with M.A. secondary graduates have been omitted since the sample size was only one (1).

This chapter is divided into five sections. The first section contains an analyses of the correlation of selected variables for the total group of 1985 graduates. The second section shows comparisons between the B.S. and M.A. graduates. The third and fourth sections contain, respectively, comparisons of the data across four years for the B.S. and M.A. graduates. The fifth section includes a brief chapter summary.

Correlation Analyses

Table 14 shows the sample size, means, standard deviations and intercorrelation matrix for selected variables for those 1985 graduates. Correlations of the variables with the SET-I were omitted from this phase of the study. The descriptive information related to means and standard deviations will be discussed later in the Chapter.

Generally, the correlations were relatively small. Many of those that did reach the .05 level of significance were in evidence in earlier years of the study. High intercorrelations were noted within the four factors derived from the Principal's questionnaire, the three factors of the Classroom Observation Record, and the three factors from the Student Evaluation of Teacher instrument. Significant positive correlations were noted between the principal's overall rating of effectiveness and the organization factor from the COR and from three of the four factors of the Tuckman Teacher Feedback Form. Thus it appeared that principals and independent observers were perceiving many of the same characteristics of the graduates. In general the three factors derived from the SET-II were correlated negatively with factors from the COR ($p < .05$). These findings indicated that the independent observers and children of the graduates were viewing certain characteristics in different ways.

Correlations within the Flanders Interaction Analysis factors were similar to those reported in earlier years of the study. Again, there were significant relationships noted between the various factors of the COR and the Tuckman. Thus there was consistency in the two rating instruments.

Table 14

CORRELATION MATRIX FOR SELECTED VARIABLES FOR 1985 GRADUATES (N=43)*

	N	$\bar{X}$	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. PRIN-I	43	4.3	0.6	100	75	83	74	-04	-19	27	-14	-14	-28	14	15	02	-01	04	06	00	03	-04	16
2. PRIN-II	43	4.5	0.7		100	60	62	34	05	58	-09	-04	-29	17	10	03	07	11	08	-10	-01	-05	07
3. PRIN-III	43	4.3	0.6			100	83	-06	-15	25	-06	-11	-25	19	01	00	-10	09	-04	-06	-04	04	-02
4. PRIN-IV	43	4.4	0.6				100	-01	-02	18	-04	-07	-31	17	08	10	03	02	06	-05	12	15	-03
5. SET 2-RAPPORT	16	4.85	0.4					100	38	50	53	37	-27	19	-22	06	46	57	52	-17	-06	23	-07
6. SET 2-STYLE	16	8.85	1.3						100	38	28	14	-10	-35	-10	-15	29	34	37	-15	-27	05	-31
7. SET 2-ESTEEM	16	6.32	0.5							100	-10	25	-02	-14	-29	-08	-21	-19	-05	03	-18	-24	-01
8. I/D	43	1.56	1.65								100	17	-02	02	-07	03	18	34	36	-31	29	43	19
9. i/d	43	0.39	0.27									100	27	43	-90	02	-01	-01	-01	-08	-07	13	19
10. ST/TT	43	0.49	0.48										100	-06	-33	11	02	-28	-04	14	14	-01	-18
11. St1/Tot	43	0.43	0.42											100	-44	07	-04	-16	-16	-29	-24	-11	04
12. Lec/Tot	43	0.66	0.15												100	-02	07	23	08	14	20	-11	01
13. COR-I	43	48.5	1.5													100	85	17	41	32	47	60	07
14. COR-II	43	74.3	4.0														100	40	62	28	53	72	06
15. COR-III	43	23.8	3.5															100	49	09	17	25	-10
16. TUCK-I	43	29.6	6.0																100	26	40	66	00
17. TUCK-II	43	29.7	4.4																	100	25	07	-26
18. TUCK-III	43	39.8	3.9																		100	45	23
19. TUCK-IV	43	37.7	4.9																			100	17
20. F-Scale	43	101.2	21.7																				100

*Decimal points on all correlations have been omitted. Underline indicates a correlation significant at or beyond the .05 level.

Comparison of B.S. and M.A. Graduates

Table 15 shows a comparison between the B.S. and M.A. graduates for scores achieved on the California F-Scale. This table further shows a breakdown by teaching level, i.e., secondary or elementary. Those individuals who were teaching in Resource Rooms or otherwise associated with special education classes or programs were included with the elementary groups.

An examination of mean F-Scale scores indicated the two elementary groups tended to be less authoritarian in their beliefs than other groups. Mean scores were slightly higher when compared with other groups who have participated in the study in past years. However, mean scores for the B.S. secondary sample was slightly higher than for the other groups. This is reverse of the situation noted over the past several years of the study. No explanation can be offered for this observation.

Table 15

COMPARISON OF MEAN F-SCALE SCORES
FOR 1985 B.S. AND M.A. GRADUATES

Degree and Teaching Level	F-Scale		
	N	$\bar{X}$	SD
B.S. Elementary	16	95.3	22.5
M.A. Elementary	21	100.8	18.5
B.S. Secondary	6	118.5	24.0
M.A. Secondary		N.A.	
Composite	43	101.2	21.7

Table 16 shows mean principal ratings for the three groups (B.S. and M.A. by teaching level). In general there were no differences between the three groups. The B.S. elementary graduates received the lowest overall ratings, followed by the M.A. elementary teachers and then the secondary teachers. Those with the bachelor's degree received slightly lower overall mean ratings than those with only the master's degree. This is consistent with the general trend noted in the past several years of the study.

Comparisons of SET-I scores for the B.S. secondary and M.A. secondary graduates were shown in Table 18. There were no differences between the three groups on each of the six factors with the exception of Factor III Lively and Interesting, secondary B.S. graduates were rated significantly higher than the other groups.

Data collected through administration of the SET-II were shown in Table 18. The SET-II was used in classrooms below the fourth grade. There were no differences between the two groups. It appeared that the children might be favoring those individuals who held the Master's degree.

Mean ratios derived from administration of the Flanders Interaction Analysis were shown in Table 19. The data were mixed and similar to that previously reported in earlier years of the application of the Model to gather information for program improvement. It was difficult to establish a pattern of interaction among the four groups.

Results from the administration of the Classroom Observation Record were shown in Table 20. There were basically no differences between the three groups on the three factors derived from the instrument. In general the scores were higher than those reported in past years of the study.

Data gathered by use of the Tuckman Teacher Feedback Form were shown in Table 21. Based on the application of the instrument, there appeared to be no differences in the three groups. There was no pattern to the data.

In summary, the results of this part of the study were mixed. The bachelor's level graduates appeared to be functioning at a comparable level to the master's graduates, as measured by selected instruments, and vice versa. Also, it appeared that in some cases those individuals teaching in the elementary grades were functioning at a higher level than those teaching at the secondary level. In general the differences between the groups were small and not statistically significant.

Comparison of First Year B.S. Graduates 1982-85

This section contains a summary of the results of the comparisons of first year B.S. graduates for the period 1982 through 1985. Previous research indicated there were few differences between those individuals teaching at the elementary and secondary levels. The analysis of variance technique was employed to determine differences between the four groups.

Table 22 shows a comparison of the mean F-Scale scores for the four groups. F-Scale scores over the four years were mixed with there being no significant differences between the four groups.

Table 16

COMPARISON OF MEAN PRINCIPAL'S RATINGS FOR 1985 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N=6)		M.A. Elem. (N=21)		B.S. Sec. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Subject Matter Competence	4.1	0.6	4.5	0.6	4.6	0.6
II Relations with Students	4.3	0.7	4.6	0.7	4.7	0.5
III Appropriateness of Assignments	4.1	0.6	4.5	0.5	4.3	0.5
IV Overall Effectiveness	4.1	0.6	4.5	0.5	4.5	0.5

Table 17

COMPARISON OF MEAN SET-I SCORES FOR 1985 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N=8)		M.A. Elem. (N=11)		B.S. Sec. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Friendly and Cheerful	343.0	18.6	316.7	56.6	358.4	54.8
II Knowledgeable and Poised	331.6	22.1	332.5	27.2	342.3	32.8
II Lively and Interesting	276.0	33.7	273.1	66.2	318.8	77.8
IV Firm Control (Discipline)	314.1	40.6	302.7	29.0	324.4	40.2
V Non-Directive (Democratic Process)	265.0	52.3	224.3	58.8	266.4	70.3
Composite Score	303.0	16.4	289.9	35.4	322.2	50.0

Table 18

COMPARISON OF MEAN SET-II SCORES FOR 1985 B.S. AND M.A. GRADU ES

Factor	B.S. Elem. (N=5) $\bar{X}$	B.S. Elem. (N=5) SD	M.A. Elem. (N=10) $\bar{X}$	M.A. Elem. (N=10) SD
Rapport	5.4	0.6	5.6	0.4
Stimulating Interaction Style	8.6	1.0	9.0	1.4
Fosterance of Self Esteem	6.3	0.8	6.3	0.3

Table 19

COMPARISON OF FLANDERS RATIOS FOR 1985 B.S. AND M.A. GRADUATES

Ratio	B.S. Elem. (N=16)		M.A. Elem. (N=21)		B.S. Sec. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.43	1.24	1.76	1.86	1.20	2.00
i/d	0.47	0.27	0.38	0.27	0.20	0.16
ST/TT	0.79	0.67	0.33	0.16	0.24	0.17
Sil/Tot	0.34	0.26	0.51	0.48	0.36	0.49
Lec/Tot	0.59	0.12	0.68	0.16	0.80	0.13

Table 20

COMPARISON OF MEAN COR FACTOR SCORES FOR 1985 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N=16)		M.A. Elem. (N=21)		B.S. Sec. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	48.7	0.5	48.6	0.7	47.0	3.5
II	75.2	2.2	74.5	2.8	71.3	8.7
III	22.7	3.2	25.4	2.2	21.1	5.6

Table 21

COMPARISON OF MEAN TUCKMAN FACTOR SCORES FOR 1985 B.S. AND M.A. GRADUATES

Factor	B.S. Elem. (N=16)		M.A. Elem. (N=21)		B.S. Sec. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Creativity	29.4	4.7	30.0	6.0	28.8	9.7
II Dynamism (Dominance of Energy	31.2	2.2	28.9	4.6	28.7	6.8
III Organized Demeanor (Organization and Control)	40.4	3.3	39.6	4.2	38.8	4.1
IV Warmth and Acceptance	38.4	3.4	37.7	4.8	36.0	8.3

Table 22

COMPARISON OF ACT COMPOSITE AND F-SCALE SCORES FOR FIRST YEAR B.S. GRADUATES 1982-85

	1982			1983			1984			1985		
Test	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
F-Scale	14	101.6	22.1	15	106.4	16.8	15	104.5	17.2	22	101.6	23.2

A comparison of the mean ratings given by principals were shown in Table 23. The differences were not significant, however, the 1983 graduates as a group were rated lower than 1982, 1983 or 1985 graduates. The 1983 group as a whole received lower ratings than other groups who were a part of the study in the 1970's.

Results from the administration of the SET-I were shown in Table 24. Results from the 1985 sample were not significantly different from those in 1982, 1983 or 1984. However, the group as a whole was rated slightly higher by students than were subjects in the earlier phases of the study. SET-II mean scores were shown in Table 25. The 1984 graduates were rated slightly lower than the 1982, 1983 or 1984 graduates. No explanation can be offered for this observation.

Table 23

COMPARISON OF MEAN PRINCIPAL'S RATINGS FOR FIRST YEAR B.S. GRADUATES 1982-85

	1982 (N=39)		1983 (N=15)		1984 (N=14)		1985 (N=22)	
Factor	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Subject Matter Competence	4.1	0.7	3.9	0.7	4.5	0.5	4.2	0.6
II Relations with Students	4.4	0.7	4.3	0.7	4.6	0.7	4.4	0.6
III Appropriateness of Assignments	4.3	0.6	4.0	0.6	4.1	0.8	4.2	0.5
IV Overall Effectiveness	4.2	0.8	4.0	0.8	4.2	0.8	4.2	0.8

Table 24

COMPARISON OF MEAN SET-I SCORES FOR FIRST YEAR B.S. GRADUATES 1982-85

Factor	1982 (N=8) $\bar{X}$	1982 (N=8) SD	1983 (N=9) $\bar{X}$	1983 (N=9) SD	1984 (N=6)* $\bar{X}$	1984 (N=6)* SD	1985 (N=14) $\bar{X}$	1985 (N=14) SD
I Friendly and Cheerful	342.3	31.8	329.0	30.2	321.3	45.9	349.6	47.3
II Knowledgeable and Poised	345.0	41.3	351.7	28.9	345.8	24.1	336.2	24.2
III Lively and Interesting	331.7	22.0	313.9	37.3	288.3	56.5	294.3	47.3
IV Firm Control (Discipline)	312.4	24.8	295.8	12.1	316.5	29.2	318.5	40.7
V Non-Directive (Democratic Process)	267.5	38.7	255.0	40.3	245.2	62.2	265.6	60.7
Composite Score	325.3	40.6	307.8	24.4	303.8	37.4	311.2	36.3

*Secondary Teachers only.

Table 25

COMPARISON OF MEAN SET-II SCORES FOR FIRST YEAR B.S. GRADUATES 1982-85

Factor	1982 (N=8) $\bar{X}$	1982 (N=8) SD	1983 (N=7) $\bar{X}$	1983 (N=7) SD	1984 (N=5) $\bar{X}$	1984 (N=5) SD	1985 (N=4) $\bar{X}$	1985 (N=4) SD
Rapport	5.86	0.56	5.31	0.36	5.34	0.23	5.40	0.61
Stimulating Interaction Style	10.53	0.88	9.60	0.53	10.42	0.78	8.64	1.00
Fosterance of Self Esteem	6.87	0.70	6.45	0.71	7.34	0.82	6.32	0.81

Mean ratios derived from the use of Flanders Interaction Analysis were shown in Table 26. The 1983 and 1984 groups were using significantly ($p < .05$) less indirect teaching in their classrooms than the 1982 or 1985 groups.

Table 27 shows mean Classroom Observation Record scores. There were no significant differences between the four groups. However, the 1985 group achieved a mean score much lower on Factor II than the other three groups. Scores derived from the administration of the Tuckman Teacher Feedback Form were shown in Table 28. Again there were no significant differences between the four groups. The 1982 group had achieved lower mean scores on all factors than did the other groups.

In summary, there were few differences across the four groups of B.S. graduates. The scores derived from the various instruments were mixed across the period and there was no trend in evidence. The reader should keep in mind that the sample sizes for some of the groups were small and the use of extensive inferential statistics could lead to erroneous conclusions.

Table 26

COMPARISON OF MEAN FLANDERS RATIOS FOR FIRST YEAR B.S. GRADUATES 1982-85

	1982 (N=18)		1983 (N=16)		1984 (N=15)		1985 (N=22)	
Ratio	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.87	3.88	0.89	1.23	0.86	1.08	1.37	1.58
i/d	0.82	0.54	0.43	0.28	0.49	0.27	0.40	0.23
ST/TT	0.72	0.38	0.60	0.30	0.48	0.22	0.64	0.38
Sil/Tot	0.33	0.60	0.30	0.21	0.60	0.38	0.35	0.35
Lec/Tot	0.37	0.20	0.31	0.20	0.53	0.14	0.65	0.13

Table 27

COMPARISON OF MEAN COR SCORES FOR FIRST YEAR
B.S. GRADUATES 1982-85

	1982 (N=18)		1983 (N=16)		1984 (N=15)		1985 (N=22)	
Factor	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	41.8	1.5	39.9	5.8	45.3	2.6	48.2	1.8
II	65.2	2.4	57.2	12.8	63.9	3.4	74.1	5.2
III	23.0	2.1	21.6	3.2	23.1	1.8	22.3	4.0

Table 28

COMPARISON OF MEAN TUCKMAN SCORES FOR FIRST YEAR
B.S. GRADUATES 1982-85

		1982 (N=18)		1983 (N=16)		1984 (N=15)		1985 (N=22)	
Factor		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	Creativity	21.9	4.1	27.1	5.2	31.3	3.6	29.7	7.7
II	Dynamism (Dominance of Energy)	24.8	4.3	26.8	4.3	28.1	4.0	30.5	4.6
III	Organized Demeanor (Organization and Control)	30.8	6.1	32.8	4.5	39.5	3.5	40.0	3.7
IV	Warmth and Acceptance	34.3	7.4	36.2	6.8	38.4	2.1	37.7	5.5

Comparison of First Year M.A. Graduates 1982-85

This section contains a summary of the results of comparisons of first year M.A. graduates for the period 1982 through 1985. The analysis of variance technique was employed to determine differences between the three groups.

Table 29 shows a comparison of scores derived from the F-Scale. Mean F-Scale scores for the four groups were not significantly different.

Table 29

COMPARISON OF ACT COMPOSITE AND F-SCALE SCORES FOR FIRST YEAR M.A. GRADUATES 1982-85

	1982			1983			1984			1985*		
Test	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
F-Scale	27	103.3	17.2	25	103.1	18.1	24	106.5	23.3	21	100.8	18.5

* Elementary only.

Mean ratings given by principals were shown in Table 30. There were no significant differences in the four groups on each of the four variables nor were there any trends in evidence. As a whole the 1985 graduates received slightly higher mean ratings than the other three groups.

Comparisons of SET-I and SET-II scores were shown, respectively, in Tables 31 and 32. There were no significant differences between the four groups for scores on either instrument. However, there was some indication that over the four year period, the perceived level of functioning has decreased slightly on all factors.

Results of the use of Flanders Interaction Analysis were shown in Table 33. There were no significant differences across the four groups. The 1984 graduates appeared to be using less indirect teaching techniques than the other three groups. Table 36 shows the results of the administration of the Classroom Observation Record. The 1983 group rated significantly lower than the other groups on two factors of the instrument. This has been in evidence in other phases of the study. No explanation can be offered for these results. Table 37 shows a comparison of mean Tuckman Teacher Feedback Form ratings. There were no significant differences. However, the 1983 group was rated lower than the other three groups.

In summary there were few differences across the four groups of M.A. graduates who were participating in the study during their first year after receiving their last degree. In general, the 1983 graduates achieved slightly lower scores and ratings than the 1981, 1982 or 1984 graduates. The 1984 graduates appeared to be very much like the 1981 and 1982 groups.

Table 30

COMPARISON OF MEAN PRINCIPAL'S RATINGS FOR
FIRST YEAR M.A. GRADUATES 1982-85

Factor	1982 (N=26) $\bar{X}$	1982 (N=26) SD	1983 (N=25) $\bar{X}$	1983 (N=25) SD	1984 (N=24) $\bar{X}$	1984 (N=24) SD	1985 (N=21)* $\bar{X}$	1985 (N=21)* SD
I Subject Matter Competence	4.4	0.6	4.4	0.5	4.5	0.6	4.5	0.6
II Relations with Students	4.5	0.6	4.5	0.6	4.5	0.7	4.6	0.7
III Appropriateness of Assignments	4.2	0.7	4.4	0.6	4.5	0.5	4.5	0.5
IV Overall Effectiveness	4.4	0.7	4.3	0.5	4.4	0.5	4.6	0.5

* Elementary only.

Table 31

COMPARISON OF MEAN SET-I SCORES FOR FIRST YEAR
M.A. GRADUATES 1982-85

Factor	1982 (N=19) $\bar{X}$	1982 (N=19) SD	1983 (N=18) $\bar{X}$	1983 (N=18) SD	1984 (N=4)* $\bar{X}$	1984 (N=4)* SD	1985 (N=11)** $\bar{X}$	1985 (N=11)** SD
I Friendly and Cheerful	345.5	31.2	341.2	25.6	351.3	16.5	316.7	56.6
II Knowledgeable and Poised	351.7	20.1	353.3	18.2	351.3	24.2	332.5	27.2
III Lively and Interesting	304.3	33.3	292.1	37.8	278.8	41.2	273.1	66.2
IV Firm Control (Discipline)	297.3	22.0	307.2	29.2	307.0	12.1	302.7	29.0
V Non-Directive (Democratic Process)	259.6	54.5	237.4	37.3	237.0	12.1	224.3	58.8
Composite Score	311.8	22.9	306.5	20.9	305.0	14.5	289.9	35.4

*Secondary only.
**Elementary only.

Table 32

COMPARISON OF MEAN SET-II SCORES FOR FIRST YEAR M.A. GRADUATES 1982-85

	1982 (N=11)		1983 (N=6)		1984 (N=14)		1985 (N=10)	
Factor	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Rapport	5.60	6.58	5.63	0.36	5.34	0.30	5.41	0.42
Stimulating Interaction Style	10.26	0.79	10.07	0.45	9.96	0.70	9.00	1.40
Fosterance of Self Esteem	6.85	0.54	7.12	0.36	6.87	0.62	6.31	0.34

Table 33

COMPARISON OF MEAN FLANDERS RATIOS FOR FIRST YEAR M.A. GRADUATES 1982-85

	1982 (N=29)		1983 (N=25)		1984 (N=24)		1985 (N=21)*	
Ratio	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.09	0.79	1.08	1.12	0.78	0.93	1.43	1.24
i/d	0.60	0.42	0.50	0.31	0.48	0.33	0.47	0.27
ST/TT	0.65	0.49	0.49	0.28	0.46	0.22	0.79	0.67
Sil/Tot	0.21	0.24	0.34	0.35	0.54	0.36	0.34	0.26
Lec/Tot	0.46	0.20	0.48	0.17	0.53	0.11	0.59	0.12

*Elementary only.

Table 34

COMPARISON OF MEAN COR SCORES FOR FIRST YEAR M.A. GRADUATES 1982-85

	1982 (N=29)		1983 (N=25)		1984 (N=24)		1985 (N=21)*	
Factor	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	41.9	1.8	39.7	7.0	46.3	2.6	48.6	0.7
II	66.3	3.4	52.7	14.3	65.6	4.3	74.5	2.8
III	23.1	1.7	21.1	5.8	23.2	3.9	25.4	2.2

*Elementary only.

Table 35

COMPARISON OF MEAN TUCKMAN SCORES FOR FIRST YEAR M.A. GRADUATES 1982-85

		1982 (N=29)		1983 (N=25)		1984 (N=24)		1985 (N=21)*	
Factor		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	Creativity	22.8	5.4	24.6	4.6	34.1	5.0	30.0	6.0
II	Dynamism (Dominance of Energy)	24.6	4.7	24.4	3.9	30.8	5.1	28.9	4.6
III	Organized Demeanor (Organization and Control)	33.0	5.0	31.7	4.6	39.3	2.9	39.6	4.2
IV	Warmth and Acceptance	35.6	6.3	33.8	7.2	38.3	2.6	37.7	4.8

*Elementary only.

Summary

This chapter contains an overview of the results of the 13th year of the application of the Tennessee Technological University Teacher Evaluation Model to 1985 graduates of the teacher education programs of the University. The graduates were teaching across the full spectrum of grades K-12. However, based on the results of earlier work, it was found there were few differences between elementary and secondary teachers. Therefore, for purposes of the analyses reported in this chapter the data were combined in some cases.

Correlation analyses of the variables for the total group were similar to those reported in earlier years of the study. Career baseline data for the B.S. and M.A. graduates were similar to those reported in the past four years. The samples of graduates being studied have shifted in composition from largely those with the B.S. to those who have achieved both the B.S. and M.A. An examination of the various measures indicated there were few differences between the first year B.S. and M.A. graduates. In general the B.S. graduates achieved scores comparable to those of the master's level graduates. Comparisons of first year B.S. graduates with those who graduated over the past three years (1982, 1983, and 1984) indicated there were no differences. Similar results were in evidence for the M.A. graduates.

Strengths of the graduates appeared to be in such areas as organization in the classroom, subject matter competency, appropriateness of assignments and experiences for their students, good rapport with their students, being friendly and cheerful and use of praise in the classroom. Weaknesses of the graduates appeared to be in the areas of encouraging independence among their students, encouraging self esteem and being more non-directive. The majority of these weaknesses were cited for teachers in the lower elementary grades. It appears that these may be areas of concern for inservice education in the future.

CHAPTER IV

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FUTURE PLANS

The objectives of Chapter IV were fourfold: (1) to provide a brief summary of the total evaluation study conducted in 1985-86; (2) present a summary of the major conclusions of the study for the year; (3) present recommendations based on the conclusions of the study; and (4) provide a summary of the plans for the continuation of the study during 1986-87.

Summary

Three groups of subjects (graduates of the teacher education programs of Tennessee Technological University) served as subjects for the study. The sample sizes by year of graduation were as follows: 1983--16, 1984--19, and 1985--44 (including 22 B.S. and 22 M.A. graduates). Data were collected on each subject by use of standardized instruments and specially constructed questionnaires administered by trained graduate research assistants. Also, personal data about each graduate were collected from University records. Basic instrumentation and procedures for the study were pilot tested during the first year of the study and have remained essentially unchanged. The instrumentation for the current year included: (1) University permanent records and transcript information, (2) principal's evaluation of each subject, (3) administration of the California F-Scale (to those individuals participating in the study for the first time) to measure individual prejudices and anti-democratic tendencies, (4) administration of the Classroom Observation Record and the Tuckman Teacher Feedback Form, (5) administration of either the Student Evaluation of Teaching or the Student Evaluation of Teacher, and (6) a ten category interaction analysis system to record classroom behavior. All data obtained as a part of the study were divided into three major parts, e.g., an examination of second and third year participants in the study, comparisons of first year subjects across three years and comparisons of B.S. and M.A. level graduates.

The major findings of the study for the first year subjects (1985 graduates) were similar to those reported throughout the previous 12 years of the project. Comparisons made between the B.S. and M.A. graduates revealed few differences in scores and ratings of performance. However, the general trend indicated that those individuals with the M.A. were functioning at a higher level. A comparison of first year data across four years indicated there were few differences in the groups. The sample sizes were relatively small for the data collected on the second and third year teacher education graduates. Therefore, only limited inferences could be made from the data. It appeared that those individuals who had remained in the study achieved higher ratings than first year participants.

Based on the findings of the study, several conclusions were advanced and recommendations made for continuation of the study. These follow in the next sections of this chapter.

Conclusions

Following are the major conclusions of the study based on the findings of the 13th year of operation of the project. Additional analyses of the data are planned that may make other conclusions possible. This section is divided into three parts: Use of the Evaluation Model, Evaluation of the 1985 Graduates, and Comparison of Data Across Time.

Use of the Evaluation Model

(1) The plan of evaluation outlined in this report appeared to be useful in gathering information for modifying and improving the programs of teacher education at Tennessee Technological University.

(2) Instrumentation employed in the study appeared to be valid and provided essential information with regard to the graduates of the teacher education programs.

(3) Modifications can be made in the original model that can lead to more valid and useful information for an institution wishing to replicate the plan of evaluation.

(4) Additional ways need to be found to facilitate the use of the reports for curriculum development and improvement.

(5) The Model can be modified and improved which will result in data with greater validity and reliability.

Evaluation of 1985 Graduates

(1) The B.S. and M.A. subjects who participated in the study for the first year in 1985-86 exhibited characteristics similar to their counterparts who had participated in earlier phases of the project.

(2) The 1985 subjects as a whole achieved mean scores on the California F-Scale comparable with those in the past. The mean score for the group was 101 with little difference between B.S. and M.A. subjects and teaching level.

(3) Principals' ratings of performance of the graduates tended to agree with the data collected through the use of the Student Evaluation of Teaching or the Student Evaluation of Teacher, the Classroom Observation Record, and the Tuckman Teacher Feedback Form.

(4) The subjects in the study appeared to be using more indirect than direct teaching in their classrooms. Indirect/Direct ratios based on the interaction analysis system were higher than for other groups in the past four years of the application of the model.

(5) Many of the characteristics reported in the literature of good teachers were noted as a result of the administration of the Classroom Observation Record.

(6) In general graduates who had received the master's degree appeared to be functioning at a higher level than those who had received only the bachelor's degree.

The subjects of this study possessed many of the characteristics of good teachers as reported in the literature. As might be expected, it was difficult to identify specific problems. Principals praised the subjects as did their students. However, it must be kept in mind that the subjects who participated in this study were volunteers. Therefore, some bias was introduced into the total study that may make some of the conclusions and findings invalid when applied to the total population of graduates.

Comparisons of Data Across Time

(1) The 1985 B.S. and M.A. graduates of the teacher education programs of the University were functioning at a level comparable with first year 1982, 1983 and 1984 graduates.

(2) Second and third year participants in the study were functioning at or slightly above the level reported when they were in their first year of the study.

(3) As in the past, those individuals who appear to be more authoritarian in their beliefs tended to stay in the study longer.

RECOMMENDATION

Based on the findings and conclusions of the study, it was felt the following recommendations were warranted. These recommendations centered largely around the continuation and modification of the study. It was left to the individual reader to make recommendations relative to his/her individual problems and concerns and toward needed changes in the teacher education program of the institution.

(1) The basic plan outlined in this report should be replicated during 1986-87 adding another group of subjects who completed the B.S. or M.A. in 1986. However, it is felt the Model should be updated in light of recent developments in evaluation and testing.

(2) Continuing contact should be maintained with other institutions and agencies pursuing similar projects and the literature related to teacher evaluation should be continuously monitored.

(3) Further analyses of the data should be made employing more sophisticated statistical techniques.

(4) The faculty of the University and other individuals should be encouraged to review the report and to request additional data analyses to fit their individual needs.

(5) A more extensive data bank of information on all students in the teacher education programs should be established.

(6) Other studies supportive of the evaluation model should be initiated.

(7) Uses of the data in the development and modification of curricula should be encouraged by the administration of the University.

Plans for Continuation of the Study During 1986-87

During 1986-87, it is anticipated that the Tennessee Technological University Teacher Evaluation Model will be completely redesigned and combined with a more complete system for program evaluation. Through funding from the State of Tennessee, the University began the operation of a Center of Excellence on Teacher Education Evaluation. The five year project is designed to develop new and improved ways to evaluate and upgrade teacher education programs not only at Tennessee Technological University but at other colleges and universities.

As a result of the operation of the Center it is anticipated that the University will be able to accomplish much basic work into the creation of new Models for conducting followup work and to evaluation of total programs for the preparation of teachers. In turn this will lead to improved methods for the preparation of teachers.

Additional information about the Center on Teacher Education Evaluation can be obtained from the author of this report or through the Dean of the College of Education of Tennessee Technological University.

APPENDIX A

REPORTS AND STUDIES RELATED TO THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

1. Ayers, Jerry B. Report 1-Restudy. A Survey of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 through 1969, Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 49 pp.

2. Faculty of the College of Education. Report II-Restudy. Objectives of the Teacher Preparation Program, Volume I, Volume II, and Volume III. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 910 pp. Out of print.

3. Ayers, Jerry B. Report III-Restudy. A Report of Four Surveys of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 through 1970. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo), 39 pp.

4. Ayers, Jerry B. "Predicting Quality Point Averages in Master's Degree Programs in Education," Educational and Psychological Measurement, 31:491-95, 1971.

5. Ayers, Jerry B. A Survey of Student Teachers at Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 7 pp.

6. Ayers, Jerry B. Report V-Restudy. A Report of Two Surveys of the 1971 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1972. (mimeo.), 28 pp.

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9. Rohr, Michael E. and Jerry B. Ayers. "Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance," The Journal of Experimental Education, 41:58-62, 1973.

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14. Ayers, Jerry B. Report 74-1. A Report of Three Surveys of the 1973 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 34 pp.

15. Riddle, Barbara Ann. Report 74-2. An Evaluation of the Graduate Program in Health and Physical Education at Tennessee Technological University by a Followup Study of the Graduates. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 119 pp.

16. Ayers, Jerry B. and Robert E. DuBey. "Student Teachers Attitudes Toward Supervising Teachers," The Educational Catalyst, 4:17-22, 1974.

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18. Ayers, Jerry B. Report 74-3. Study of the Graduates of the Library Science Program of Tennessee Technological University 1969-73. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 28 pp.

19. Bilbrey, Leroy. Human Relations Skills and Teacher Effectiveness. Unpublished M.A. Thesis, College of Education, Tennessee Technological University, 1974.

20. Ayers, Jerry B. Report 74-4. Tennessee Technological University Teacher Evaluation Model. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 92 pp., ERIC No. 095 169.

21. Duncan, Barbara Louise. Report 74-5. Study of the Graduates of the Counselor Education Program of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 33 pp.

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28. Ayers, Jerry B. Report 75-5. Application of Tennessee Technological University Teacher Evaluation Model in Methods Classes in the College of Education. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 26 pp.

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37. Ayers, Jerry B. Report 77-2. Tennessee Technological University Teacher Evaluation Model--Year IV, Cookeville, TN: Tennessee Technological University, College of Education, 1977, 100 pp. ERIC Document No. 148 778.

38. Ayers, Jerry B. Report 78-1. A Report of Three Surveys of the 1977 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1978. (mimeo.), 20 pp.

39. Ayers, Jerry B. Report 78-2. Tennessee Technological University Teacher Evaluation Model--Year V, Cookeville, TN: Tennessee Technological University, College of Education, 1978, 54 pp. ERIC Document No. 167 487.

40. Ayers, Jerry B. Report 79-1. A Report of Three Surveys of the 1978 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1979. (mimeo.), 21 pp.

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44. Ayers, Jerry B. "Evaluation for Program Improvement in Teacher Education," Presented in part before the 5th International Conference on Improving University Teaching, London, England, July 1979.

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